REMARKS

Entry and consideration of this Amendment is respectfully requested.

Claims 28 and 29 are all the claims pending in the application.

The claim rejections of the Final Office Action of July 20, 2001 are as follows. Claim 29 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 28 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawazoe et al. (USP 5,781,317) in view of Minami (USP 5,372,900). Claim 29 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Molteni et al. (USP 5,473,447) in view of Moss et al. (USP 5,016,953). Applicant respectfully traverses the rejections as set forth below.

Claim 29 is amended herein. The amendment of claim 29 is believed to overcome the indefiniteness rejection thereto, but the amendment does not narrow the scope of the claim. Rather, the amendment clarifies the meaning of the claim language to which the rejection is directed. Also, claim 29 is amended to remove both instances of the word "first" before "transmission type hologram" to make the recitation of the transmission type hologram consistent throughout the claim.

With respect to the rejection of claim 28, Applicant submits that Kawazoe et al. fail to teach or suggest a hologram-recorded medium comprising a collection of pixels. Instead, Kawazoe et al. teach a holographic optical element, which is not taught as comprising a collection of pixels. Furthermore, Minami fails to make up for this deficiency of Kawazoe et al. Thus, claim 28 is believed to be allowable over the prior art for at least this reason.

In the Amendment filed May 15, 2001, claim 28 was amended to include a limitation of the reflection type relief hologram comprising a computer generated hologram (CGH). In response, the Examiner cites Minami as disclosing this feature of claim 28.

Minami is directed to a method of reproducing a reflecting type of hologram from a reflecting type master hologram. However, Minami is directed to a chemical etching process to produce a hologram. Such a process is contrary to Applicant's invention which claims a method of fabricating a hologram-recorded medium via an optical process. Therefore, one of ordinary skill in the art at the time of Applicant's invention would not have been motivated to combine the teachings of Kawazoe et al. and Minami. Hence, claim 28 is believed to be allowable for this additional reason.

Claim 29 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Molteni et al. in view of Moss et al. The Examiner cites Moss et al. for the teaching of a transmission type hologram comprising a computer generated hologram (CGH).

Molteni et al. disclose a three-step process for producing stereograms. However, as admitted by the Examiner, Molteni et al. do not disclose the use of a volume type hologram. The Examiner asserts that since both volume holograms and thin holograms are known types of holograms distinguished only by the fringe size compared to the thickness of the recording plate it would have been an obvious matter of design choice to produce the hologram as a volume hologram. The Applicant disagrees for the following reasons.

As the Examiner correctly recognizes, there are different classifications for holograms. However, the holograms are not interchangeable as the Examiner contends, as the holograms are created in fundamentally different ways. In thin holograms, such as Molteni et al., the fringes are formed two-dimensionally as changes of surface irregularity. By contrast, in volume holograms, fringes are recorded three-dimensionally in the hologram. Accordingly, the difference between holograms in Molteni et al. and that of the present invention is not merely

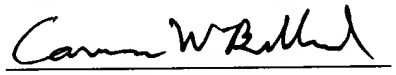
thickness, but a fundamental difference in recording fringes. Thus, claim 29 is believed to be allowable over the prior art for at least this reason.

Moss et al. is directed to the reduction of noise in computer generated holograms. According to Moss et al., a reflection type hologram is produced from a transmission type CGH, which is a master hologram, through a succession of intermediate copy holograms. First, the master hologram 33a is made. Then a copy hologram 47 is made from the master hologram 33a. The copy hologram 47 is used to make a "subcopy," which is used to make a "sub-subcopy." Col. 4, lines 45-68. By contrast, the present invention uses a single reproduction process to obtain the final reproduction product. Thus, even if the teachings of Molteni et al. and Moss et al. were to be combined, the combination would not read on Applicant's invention. Claim 29 is believed to be allowable for this additional reason.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

29. (Four Times Amended) A method of fabricating a hologram-recorded medium which is an imagewise or other pattern-recorded medium comprising a collection of pixels, and in which any one o plurality of volume type diffraction gratings comprising volume holograms and differing from each other is assigned to at least a part of said pixels, the method comprising:

stacking a photosensitive material, capable of recording a volume hologram, on a [first] transmission type hologram,

striking reconstructing illumination light of given wavelength on a first side of said [first] transmission type hologram that is [not directly across from] opposite a second side of said transmission type hologram which is facing said photosensitive material, so that interference fringes produced by interference of light diffracted from said transmission type hologram and reference light incident on said photosensitive material are recorded in said photosensitive material, wherein said transmission type hologram comprises a computer generated hologram (CGH).